AMERICAN LUNG ASSOCIATION® of Virginia

Virginia Department of Environmental Quality
Public Comments Re: Potomac River Generating Station – Mirant
May 22, 2007

The Lung Association has been a strong advocate for Virginians fighting to improve the quality of the air our citizens breathe indoors and outdoors. The Association works on behalf of those suffering from chronic respiratory disease as well as children and the elderly, populations that are particularly sensitive to air pollution. Toward this end, we monitor regulatory actions that have the potential to strengthen, protect or weaken air pollution controls in Virginia.

While air pollution is unsafe for everyone, some people are at increased risk because of their age or health situation. Those groups include people with asthma, adults 65 and older, children under 18, people with chronic obstructive pulmonary disease (COPD – chronic bronchitis and emphysema) and anyone with cardiovascular disease or diabetes.

Rapid advances are being made in understanding the role of the environment in the illnesses of infancy and childhood. The emerging body of knowledge, known as environmental pediatrics shows that children are uniquely vulnerable to the effects of environmental contaminants, in part because their developing organs may be more susceptible to environmental contaminants than are the target organs of adults, and also because they may absorb and metabolize chemicals differently from adults. These findings should have significant implications for setting policy.

Nitrogen Dioxide (NOx) Plays an Important Role in the Atmospheric Reactions that Generate Ground-Level Ozone

Nitrogen dioxide can irritate the lungs and lower resistance to respiratory infections such as influenza. The effects of short-term exposure are still unclear, but continued or frequent exposure to concentrations higher than those normally found in the ambient air may cause increased incidences of acute respiratory disease in children. Nitrogen oxides are an important precursor to both ozone and acid rain. In some parts of the western U.S., NOx have a significant impact on the formation of particulate matter.

Approximately 7 million people in the DC metro area live in areas with unhealthy ozone pollution. Those most vulnerable to ozone pollution are children, senior citizens and people with respiratory diseases like asthma. DC metro area ranked 11th worst ozone exposure.

Ozone pollution health effects include:

- Coughing and wheezing
- Asthma attacks
- Reduced lung function
- Chest pain

- Birth defects
- Premature death

Sulfur Dioxide is a Major Precursor for $PM_{2.5}$
The major health concerns associated with exposure to high concentrations of Sulfur Dioxide (SO2) include effects on breathing, respiratory illness, alterations in the lungs' defenses, and aggravation of existing cardiovascular disease. Major subgroups of the population that are most sensitive to SO2 include asthmatics and individuals with cardiovascular disease or chronic lung disease, as well as children and the elderly.

There are approximately 3 million people in the DC metro area living in areas with unhealthy particle pollution. Those most vulnerable to particle pollution include senior citizens, people with heart and/or lung diseases and children.

Particle pollution health effects include:

- Coughing and wheezing
- Asthma exacerbations
- Respiratory Irritation
- Heart Attacks
- Irregular Heartbeat - (cardiac arrhythmias)
- Premature Death

Deaths can occur on the very day that particle levels are high, or within one to two months afterward. Breathing particle pollution year-round can shorten life by one to three years. It causes many other health effects, premature births to serious respiratory disorders, even when the particle levels are very low. It makes asthma worse and causes wheezing, coughing and respiratory irritation in anyone with sensitive airways. It also triggers heart attacks, strokes, irregular heartbeat, and premature death.

According to the American Lung Association State of the Air Report: 2007, The Washington-Baltimore-Northern Virginia, DC-MD-VA-WV ranked 11th worst for short-term particle exposure, and 20th for year-round exposure to particles.

The lungs are our main point of contact with the environment around us – we breathe 50 to 60 pounds of air a day so that makes them vulnerable to airborne gases like ozone or fine particle pollution.

Air pollution shortens lifespan, it lands our children and elderly in emergency rooms, and it can make children and teens more vulnerable to lung disease for the rest of their lives.

The American Lung Association of Virginia finds these levels of pollution unacceptable and urges the Virginia Department of Environmental Quality to uphold the Clean Air Act by issuing a comprehensive state operating permit that limits Mirant's emissions of all pollutants, **including fine particulate matter (PM2.5)**, to levels allowed by health-based standards, both in regional and local areas. The Association also supports the establishment of a local air pollution control district in the areas of Alexandria impacted by Mirant and urges VDEQ to make this establishment of this district a priority.

Even with the upcoming adoption of CAIR ,Virginia will continue to be plagued with dirty air, subjecting millions of children, seniors and people with asthma and other lung diseases to breathing dangerous air pollution. It is imperative to the health of Virginians that VDEQ ensures that Virginia meets the health-based ambient air quality standards, therefore resulting in significant health benefits for the Commonwealth.

Thank you for the opportunity to share comments in the development of the State Operating Permit for the Potomac River Generating Station – Mirant.